

**AMENDMENTS TO THE DRAWINGS**

FIG. 3 is amended to change reference number 105 to 310, and reference number 210 to 311.

FIG. 5C is amended to change reference number 516 to 513, and to change the elements pointed to by reference numbers 515 and 516 to  $x_1^1$  and  $x_1^2$ , respectively.

FIG. 9 is amended to change reference number 204 to 203.

FIG. 10B is amended to add a reference number 1005 to element  $\alpha$ .

FIGs. 10D, 10E, and 10F, are amended to add a reference number 1007 to element ROI.

FIG. 10F is further amended to change reference number 1007 to 1008.

### **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed November 20, 2006 (Paper No. 20061030). Upon entry of this response, claims 1-3, 5-7, 9-13, and 15-25 are pending in the application. In this response, claims 1-3, 5, 9-13, 15, and 17-18 have been amended, claims 19-25 have been added, and claims 4, 8, and 14 have been cancelled. Applicant respectfully requests that the amendments being filed herewith be entered and request that there be reconsideration of all pending claims.

#### **1. Drawings Objections**

The drawings have been objected to because of various problems with the reference numerals. Figures 3, 5C, 9, 10B, 10D, 10E, and 10F have been amended as described above in the section "Amendments to the Drawings". Applicant submits that all the drawing objections have been overcome by either amendments made to the drawings or amendments made to the specification. Applicant therefore requests that the objections be withdrawn.

#### **2. Specification Objections**

##### **a. Informalities**

The specification has been objected to as containing various informalities. Specifically, the Office Action indicates several portions of the specification which are inconsistent with the drawings. Office Action, pages 3-5, section 6. The specification has been amended to correct these inconsistencies, and Applicant respectfully requests that the objection be withdrawn.

##### **b. Antecedent Basis**

The specification has been further objected to as "failing to provide proper antecedent basis for the claimed subject matter" of claims 6 and 11. Office Action, p. 5, section 7. Applicant respectfully traverses the objection to claim 6, and respectfully submits that claim 6 is described at least in para. 73 of the instant specification. Claim 11 has been amended, and Applicant

respectfully requests that the objections be withdrawn. Applicant respectfully asserts that this amendment is supported by at least para. 55 of the instant specification.

3. Claim Objections

Claims 8, 15, and 17-18 are objected to because of various informalities. Claim 8 has been cancelled, thus rendering moot the objection to claim 8 and dependent claim 9. Claims 15, 17, and 18 have been amended as indicated the Office Action. Applicant respectfully submits that the objections have been overcome, and requests that the objections be withdrawn.

4. Rejection of Claim 17 under 35 U.S.C. § 101

Claim 17 stand rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Specifically, the Office Action states that “since electromagnetic and infrared propagation mediums are not a tangible, physical article or object to constitute a manufacture, and it’s not a machine, process or composition of matter, the previously mentioned claim does not fall within a statutory category of invention.” Office Action, p. 6, section 10. As suggested in the Office Action, Applicant has amended the specification to delete the words “electromagnetic” and “infrared” from paragraph 26. Applicant believes the amendment overcomes the rejection of claim 17, and requests that the rejection be withdrawn.

5. Rejection of Claims 2-3, 5-6, 9, and 12-16 under 35 U.S.C. § 112, Second Paragraph

Claims 2-3, 5-6, 9, and 12-16 have been rejected under 35 U.S.C. §112, second paragraph, as alleged being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. Applicant believes the claim amendments made herein, and described below, overcome the rejection of claims 2-3, 5-6, 9, and 12-16, and requests that the rejection be withdrawn.

a. Claim 2

The Office Action states that claim 2 has insufficient antecedent basis for “the matrix” and “the reference matrix”. Office Action, p. 7, section 12. Claim 2 is amended to recite “the at least one segmentation matrix” and “the template matrix,” where antecedent basis for “the at least one segmentation matrix” is found in claim 1 as amended herein.

b. Claim 3

The Office Action states that claim 3 has insufficient antecedent basis for “the performing step” and “the matrix”. Claim 3 is amended to recite “the at least one segmentation matrix,” where antecedent basis for “the at least one segmentation matrix” is found in claim 1 as amended herein. Antecedent basis for “the performing step” in claim 3 is also found in claim 1 as amended herein.

c. Claims 5, 9, and 10

The Office Action states that claims 5, 9, and 10 have insufficient antecedent basis for “the matrix”. Claims 5 is amended to recite “the template matrix”, where antecedent basis for “the template matrix” is found in claim 1. Claim 6 is dependent on claim 5. Claims 9 and 10 are each amended to recite “the segmentation matrix”, where antecedent basis for “the segmentation matrix” is found in claim 1.

d. Claims 12 and 13

The Office Action states that claims 12 and 13 have insufficient antecedent basis for “the submatrix”. Claims 12 and 13 are amended to depend from claim 2, which provides antecedent basis for “the submatrix”.

e. Claim 14

The Office Action states that claim 14 recites the same limitations of claim 13. Claim 14 has been cancelled.

f. Claims 15 and 16

The Office Action states that claims 15 and 16 have insufficient antecedent basis for “the extracting step”. Claims 15 is amended to depend from claim 2, which provides antecedent basis for “the submatrix”. Claim 16 is dependent on claim 15.

6. Rejection of Claims 1-2, 7, 13-14, and 17-18 under 35 U.S.C. §102

Claims 1-2, 7, 13-14, and 17-18 have been rejected under §102(e) as allegedly anticipated by *Berube et al.* (U.S. 7,130,454). Applicant respectfully traverses this rejection. A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983).

a. Claims 1, 17, and 18

Claims 1, 17, and 18 have been amended to recite “performing color segmentation on the digital color image to produce at least one segmentation matrix...wherein the performing color segmentation comprises comparing a plurality of color components at each of a plurality of pixel locations within the digital color image to the color criterion, the color criterion comprising at least one relationship between two color components selected from the group of R,G,B.” Applicant respectfully submits that *Berube et al.* does not disclose, teach, or suggest this feature. The Office Action alleges that the “color matching stage” referred to at Col. 2, lines 44-47 of *Berube et al.* corresponds to the “color criterion” recited in claims 1, 17, and 18. Color matching is described further in *Berube et al.* as follows:

A combination stage combines the unrefined region of interest with one or more pre-stored flesh tone colors to refine the region of interest based on the color...the flesh tone colors are stored in any suitable storage element, such as a look-up-table. The flesh tone colors are compiled by generating a color histogram from a plurality of reference people”  
*Berube et al.*, Col. 5, lines 33-36 and 47-50

Thus, *Berube et al.* suggests, at most, a general idea of comparing regions of a captured image to pre-stored colors. Even assuming, *arguendo*, that this pre-stored color is a “color criterion”, *Berube et al.* does not disclose, teach, or suggest that color criterion includes “at least one relationship between two color components selected from the group of R,G,B.” Thus, Applicant respectfully submits that *Berube et al.* does not anticipate amended claims 1, 17, and 18, and requests that the rejection of claims 1, 17, and 18 be withdrawn.

b. Claims 2, 7, and 13-14

Since claims 1, 17, and 18 are allowable, Applicant respectfully submits that claims 2, 7, and 13-14 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claims 2, 7, and 13-14 be withdrawn.

7. Rejection of Claim 3 under 35 U.S.C. §103

Claim 3 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Laumeyer et al.* (6,453,056). Applicant respectfully traverses this rejection. The addition of *Laumeyer et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claim 3 is considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claim 3 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claim 3 be withdrawn.

8. Rejection of Claims 4 and 8 under 35 U.S.C. §103

Claims 4 and 8 have been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Lin et al.* (7,039,229). Applicant respectfully traverses this rejection. The addition of *Lin et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claims 4 and 8 are considered patentable

under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claims 4 and 8 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claims 4 and 8 be withdrawn.

9. Rejection of Claims 5-6 under 35 U.S.C. §103

Claims 5-6 have been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Lin et al.* (7,039,229) and *Nakajima et al.* (6,285,778). Applicant respectfully traverses this rejection. The addition of *Nakajima et al.* and *Lin et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claims 5-6 are considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claims 5-6 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claims 5-6 be withdrawn.

10. Rejection of Claim 9 under 35 U.S.C. §103

Claim 9 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Michael et al.* (6,539,107). Applicant respectfully traverses this rejection. The addition of *Michael et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claim 9 is considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claim 9 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claim 9 be withdrawn.

11. Rejection of Claim 10 under 35 U.S.C. §103

Claim 10 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Kim et al.* (2001/0040982). Applicant respectfully traverses this rejection. The addition of *Kim et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claim 10 is considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claim 10 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claim 10 be withdrawn.

12. Rejection of Claim 11 under 35 U.S.C. §103

Claim 11 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Gersten* (6,928,193). Applicant respectfully traverses this rejection. The addition of *Gersten* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claim 11 is considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claim 11 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claim 11 be withdrawn.

13. Rejection of Claim 12 under 35 U.S.C. §103

Claim 12 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Oosawa* (2001/0048757). Applicant respectfully traverses this rejection. The addition of *Oosawa* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claim 12 is considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claim 12 is allowable for at least the reason that it depends from an allowable

claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claim 12 be withdrawn.

14. Rejection of Claims 15-16 under 35 U.S.C. §103

Claims 15-16 has been rejected under §103(a) as allegedly obvious over *Berube et al.* (7,130,454) in view of *Xia et al.* (2001/0036300). Applicant respectfully traverses this rejection. The addition of *Xia et al.* does not cure the deficiencies of *Berube et al.* discussed above in connection with claims 1, 17, and 18. Therefore, claims 15-16 are considered patentable under any combination of these references. Furthermore, since claim 1 is allowable, Applicant respectfully submits that claims 15-16 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant respectfully requests that the rejection of claims 15-16 be withdrawn.

15. Newly Added Claims

Applicant submits that new claims 19-25 are allowable over the cited references. Specifically, dependent claims 19-25 are allowable over the cited references for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicant requests the Examiner to enter and allow the above new claims.

**CONCLUSION**

Applicant respectfully request that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 1-3, 5-7, 9-13, and 15-25 be allowed to issue. Any statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. If the Examiner has any questions or comments regarding Applicant's response, the Examiner is encouraged to telephone Applicant's undersigned counsel.

Respectfully submitted,

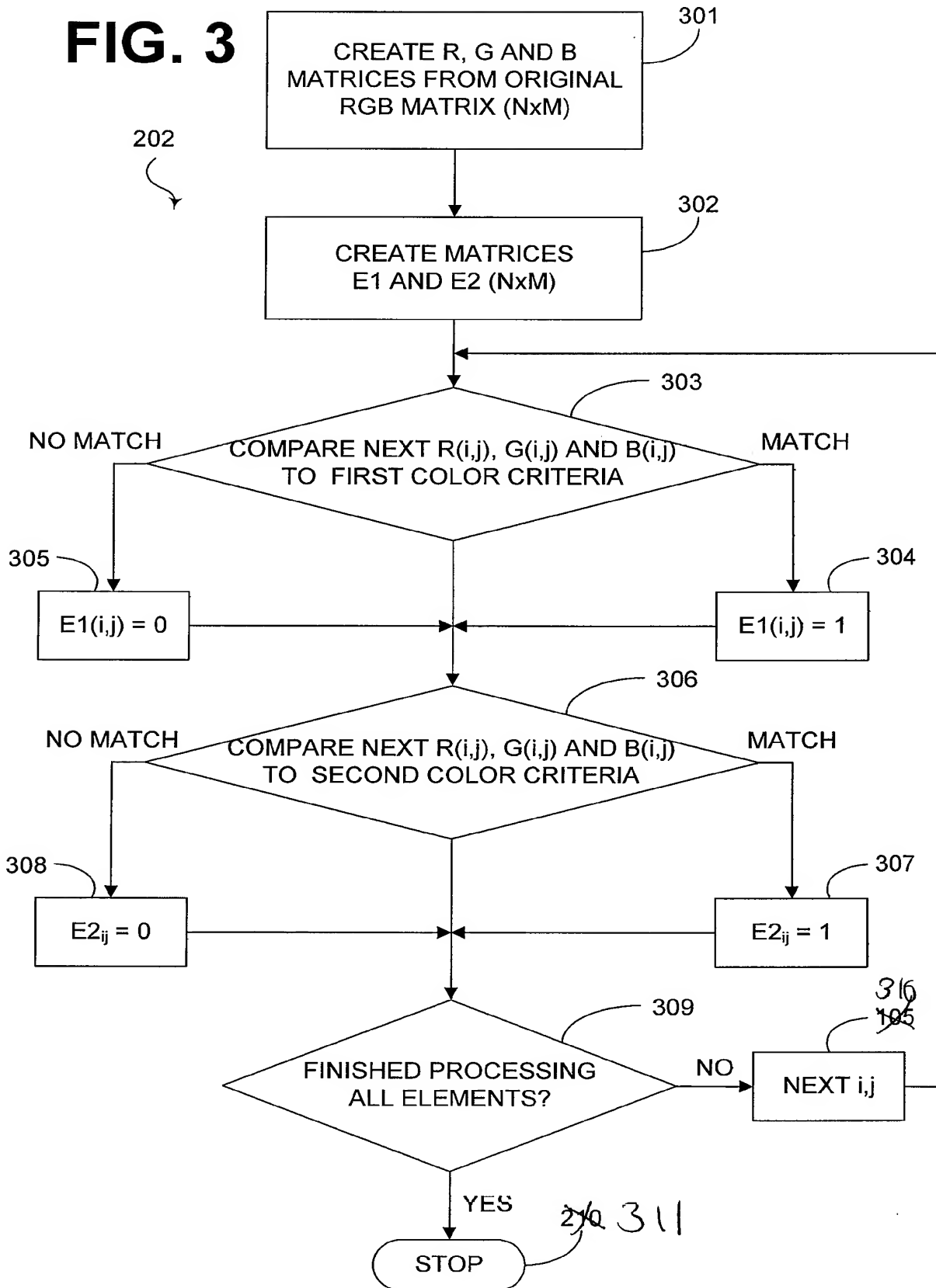
By: /Karen G. Hazzah/

Karen G. Hazzah,  
Reg. No. 48,472

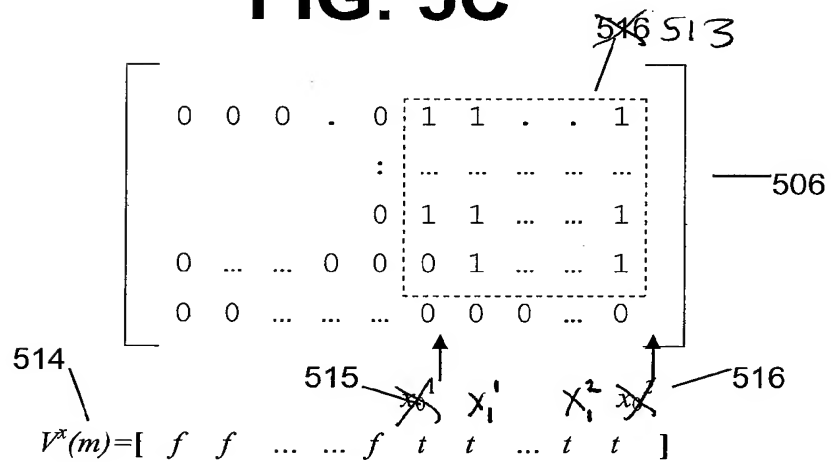
**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**

100 Galleria Parkway, NW  
Suite 1750  
Atlanta, Georgia 30339-5948  
Tel: (770) 933-9500  
Fax: (770) 951-0933

**FIG. 3**

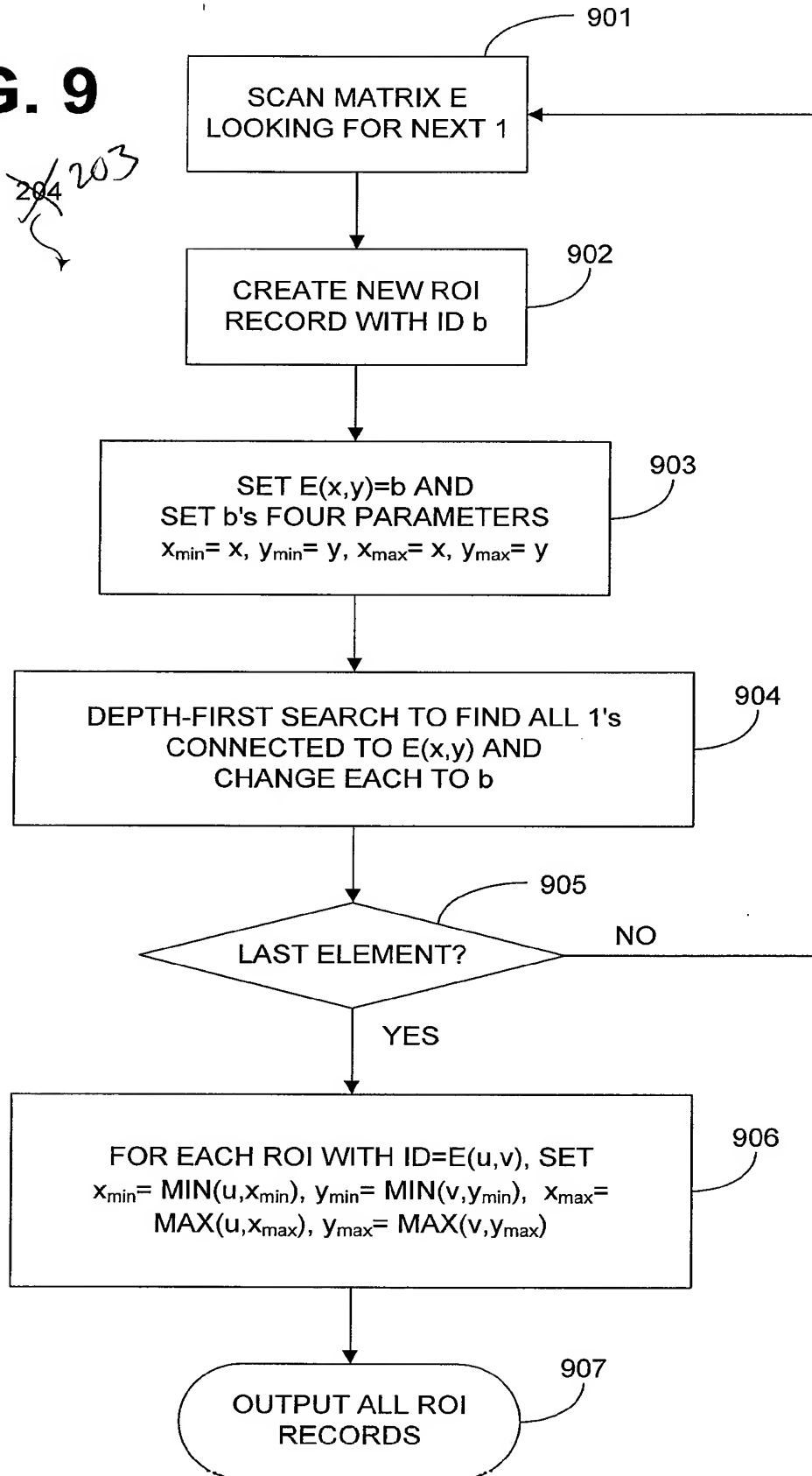


**FIG. 5C**



**FIG. 9**

~~204~~ 203  
↘



**FIG. 10A**

	0	0	0	0	0	0	0	1	1	0
	0	0	0	0	0	1	1	1	0	1
	0	0	0	0	0	1	1	1	1	1
	0	0	1	1	0	1	0	1	1	0
	0	0	1	1	0	1	1	1	0	0
	0	1	1	1	0	0	1	0	0	0
1001	1	1	1	1	0	0	0	0	0	0
	0	0	1	1	1	1	1	1	0	0
	0	1	1	1	1	0	1	1	0	0
	0	0	0	0	0	0	0	0	0	0

**FIG. 10B**

	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	1	0
	0	0	0	0	0	1	1	1	0	1
	0	0	0	0	0	1	1	1	1	1
	0	0	1	1	0	1	0	1	1	0
	0	0	1	1	0	1	1	1	0	0
	0	1	1	1	0	0	1	0	0	0
1001	1	1	1	1	0	0	0	0	0	0
	0	0	1	1	1	1	1	1	0	0
	0	1	1	1	1	0	1	1	0	0
	0	0	0	0	0	0	0	0	0	0

1004  
 |  
 ROI  $a$  1005  
 $x_{\min} = 1$   
 $y_{\min} = 8$   
 $x_{\max} = 1$   
 $y_{\max} = 8$

**FIG. 10C**

	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$a$	0
	0	0	0	0	0	$a$	$a$	$a$	0	$a$
	0	0	0	0	0	$a$	$a$	$a$	$a$	$a$
	0	0	1	1	0	$a$	0	$a$	$a$	0
	0	0	1	1	0	$a$	$a$	$a$	0	0
	0	1	1	1	0	0	$a$	0	0	0
1001	1	1	1	1	0	0	0	0	0	0
	0	0	1	1	1	1	1	1	0	0
	0	1	1	1	1	0	1	1	0	0
	0	0	0	0	0	0	0	0	0	0

1004  
 |  
 ROI  $a$  1005  
 $x_{\min} = 1$   
 $y_{\min} = 8$   
 $x_{\max} = 1$   
 $y_{\max} = 8$

**FIG. 10D**

1006

1001

1003

0	0	0	0	0	0	0	0	a	a	0
0	0	0	0	0	0	a	a	a	0	a
0	0	0	0	0	0	a	a	a	a	a
0	0	b	1	0	a	0	a	a	0	0
0	0	1	1	0	a	a	a	0	0	0
0	1	1	1	0	0	a	0	0	0	0
1	1	1	1	0	0	0	0	0	0	0
0	0	1	1	1	1	1	1	0	0	0
0	1	1	1	1	0	1	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0

1007  
 ROI      b  
 X<sub>min</sub>=    4  
 Y<sub>min</sub>=    3  
 X<sub>max</sub>=    4  
 Y<sub>max</sub>=    3

**FIG. 10E**

1006

1001

0	0	0	0	0	0	0	0	a	a	0
0	0	0	0	0	0	a	a	a	0	a
0	0	0	0	0	0	a	a	a	a	a
0	0	b	b	0	a	0	a	a	0	0
0	0	b	b	0	a	a	a	0	0	0
0	b	b	b	0	0	a	0	0	0	0
b	b	b	b	0	0	0	0	0	0	0
0	0	b	b	b	b	b	b	0	0	0
0	b	b	b	b	b	b	b	0	0	0
0	0	0	0	0	0	0	0	0	0	0

1007  
 ROI      b  
 X<sub>min</sub>=    4  
 Y<sub>min</sub>=    3  
 X<sub>max</sub>=    4  
 Y<sub>max</sub>=    3

**FIG. 10F**

1006

1001

0	0	0	0	0	0	0	0	a	a	0
0	0	0	0	0	0	a	a	a	0	a
0	0	0	0	0	0	a	a	a	a	a
0	0	b	b	0	a	0	a	a	0	0
0	0	b	b	0	a	a	a	0	0	0
0	b	b	b	0	0	a	0	0	0	0
b	b	b	b	0	0	0	0	0	0	0
0	0	b	b	b	b	b	b	0	0	0
0	b	b	b	b	b	b	b	0	0	0
0	0	0	0	0	0	0	0	0	0	0

1007  
 ROI      b  
 X<sub>min</sub>=    4  
 Y<sub>min</sub>=    3  
 X<sub>max</sub>=    4  
 Y<sub>max</sub>=    3

~~1007~~ 1008